NIEHS Hurricane Response Portal:
Supporting Environmental Health Science Through Geographic Information Systems

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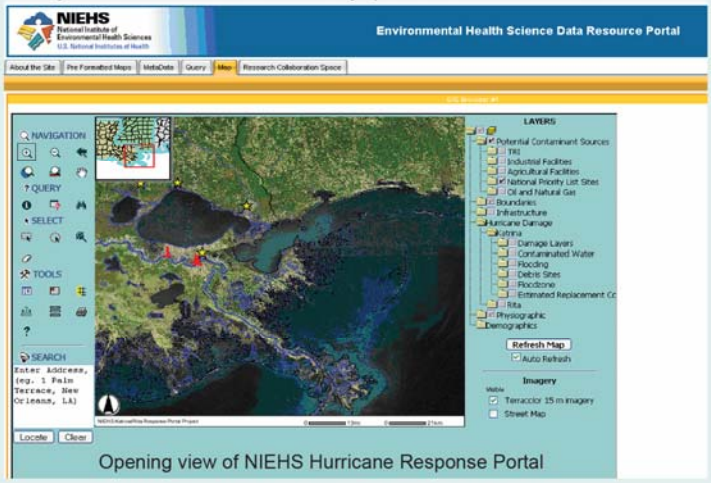
Purpose of Research Portal

The NIEHS Hurricane Response Portal allows researchers, as well as the general public, to view, interact with, and download data through a web-based GIS interface. In addition, research groups may log in to a secure portion of the portal where private data can be shared, visualized, and manipulated through the use of custom tools. By offering a variety of tools for both public and private use, the portal serves many different communities through the same basic architecture.

Functionality of Research Portal

On both the private and public side of the portal, a fully functional web-based GIS is available. The GIS contains tools that allow users to query data, measure distance, perform spatial queries, identify features, view metadata, and download layers. Behind the secure log in, users can customize their private work environment, including both data and GIS tools.



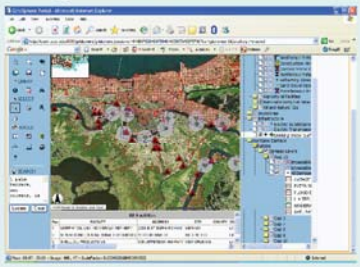
Opening view of NIEHS Hurricane Response Portal

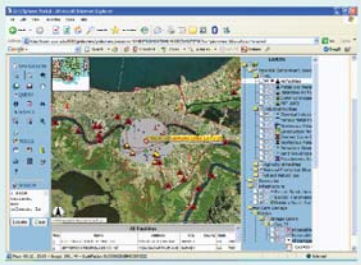
Health Consequences

Four critical potential health consequences have been identified in the aftermath of Hurricane Katrina and Rita: mold and respiratory health, solid waste management, contaminant transport and mental health. Some examples of the data required to assess these health consequences are presented above.

Different Perspectives Through GIS

The image to the left displays TRI facilities and drinking water surface intakes, while the image to the right shows TRI facilities within one mile of drinking water intakes.





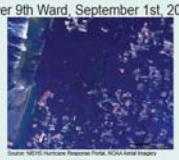
The image to the left shows TRI facilities within 3 miles of a user-entered address.The map at right displays some demographic and social variables relevant for environmental applications. These data are spatially linked to environmental data within the research portal.

The images below provide a regional and city view of flooding due to Hurricane Katrina, as well as the impacts of flooding on a neighborhood level. These two perspectives, which are both integrated into the portal, can be used to answer different types of research questions.

Industrial Canal Levee Breach

Lower 9th Ward, Pre-Katrina

Lower 9th Ward, September 1st, 2005



Lower 9th Ward, December 14th, 2005

NIEHS Hurricane Response Portal : www.niehs.nih.gov or hurricanegis@niehs.nih.gov

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